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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,662

05/15/2006

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06/02/2008

EXAMINER

CHARLES, MARCUS

ART UNIT

PAPER NUMBER

3682

MAIL DATE

DELIVERY MODE

06/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/561,662	Applicant(s) EGAMI ET AL.	
	Examiner Marcus Charles	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the first action relating to serial application number 10/561,662 filed 05-15-2006. Claims 1-18 are currently pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The examiner has accepted the drawing filed with this application as formal drawing.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3 and 12 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The intended scope of the claims are unclear and confusing because it is not clear if the limitation in parenthesis are included as part of the claimed invention. In addition, the phrase "(thickness of the sliding layer) of the sliding layer" is unclear because the phrase "of the sliding layer" is being repeated.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipate by JP (09-112560). JP (09-112560) discloses a slide bearing comprising a matrix (4) made of metal, a slide layer (5) formed on a predetermined surface of the matrix and having a bearing surface which slides with a shaft member (3), the matrix has contact surface which performs one of a rolling or sliding over a mating member and the matrix is made of an Fe-base sintered metal material.

In claim 4, note the slide layer comprises a lubricant.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP (09-112560) in view JP (2002-364647). JP (09-112560) discloses the device having a surface opening ratio between 3-15 % but does not disclose the surface opening ratio of 20-50 % and the product of linear expansion coefficient of the material composition forming the slide material composition forming the layer and the thickness of the slide is 0.15 or less. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of JP (09-112560) to include the surface opening ration of 20-50 % and the product

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ratio of 0.15 or less, since it has been held that where the general conditions of a claim is disclosed in the prior art, discovering the optimum ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

9. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP (09-112560) in view JP (2002-364647). JP (09-112560) does not disclose the slide material composition further comprises porous silica impregnated with a lubricant, such that the porous silica globular porous having interconnected pores and the lubricant is silicone oil. JP (2002-364647) discloses a bearing comprising a slide layer (2) comprising a porous silica which is a ball-like silica having a mean particle diameter of 0.5-100 μm (see pages 5, line 16-20) of the machine translation) and a the base material of the composition forming the slide is polyethylene resin (see translation page 4, lines 36), the oil comprises silicone oil (see translation page 8, line 16) in order to increase sliding effect with less friction. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device JP (09-112560) to include the limitation JP (2002-364647) order to increase sliding effect with less friction.

10. Claim 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP (09-112560) in view JP (04-152296). JP (09-112560) disclose the claimed invention in paragraph 4 above, except for the slide bearing comprising a cam follower comprising a shaft member cantilevered at one end. JP (04-152296) discloses a slide bearing comprising a cam follower in rolling contact with on a cam surface of a rocker arm. Therefore, it would have been

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obvious to one of ordinary skill in the art at the time of the invention to modify the device of JP (09-112560) so that the slide bearing is used as a cam follower having a cantilevered shaft member in view of JP (04-152296) in order to improve the rolling capacity and reduce the reactive force on the bearing during the rolling motion.

In claim 13, note the slide layer comprises a lubricant.

11. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP (09-112560) in view JP (2002-364647) as applied to claim 10 above, and further in view of JP (2002-364647). JP (09-112560) does not disclose the slide material composition further comprises porous silica impregnated with a lubricant, such that the porous silica globular porous having interconnected pores and the lubricant is silicone oil. JP (2002-364647) discloses a bearing comprising a slide layer (2) comprising a porous silica which is a ball-like silica having a mean particle diameter of 0.5-100 μm (see pages 5, line 16-20) of the machine translation) and a the base material of the composition forming the slide is polyethylene resin (see translation page 4, lines 36), the oil comprises silicone oil (see translation page 8, line 16) in order to increase sliding effect with less friction. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the device JP (09-112560) to include the limitation JP (2002-364647) order to increase sliding effect with less friction.

12. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP (09-112560) in view JP (04-152296). JP (09-112560) discloses the device having a surface opening ratio between 3-15 % but does not disclose the

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surface opening ratio of 20-50 % and the product of linear expansion coefficient of the material composition forming the slide material composition forming the layer and the thickness of the slide is 0.15 or less. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of JP (09-112560) to include the surface opening ration of 20-50 % and the product ratio of 0.15 or less, since it has been held that where the general conditions of a claim is disclosed in the prior art, discovering the optimum ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Citation

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note the prior art cited in attached PTO Form 892.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marcus Charles/

Marcus Charles

Primary Examiner, Art Unit 3682